Charter of the Software Engineering Process Group (SEPG)

Purpose

This Charter establishes the Software Engineering Process Group (SEPG) for the NASA Langley Research Center (LaRC) Software Process Improvement (SPI) initiative.

The purpose of the SEPG is to provide the focal point for the LaRC SPI initiative and maintain an organizational awareness of the overall effort. The group is responsible for developing and updating the Center Plan for LaRC Software Process Improvement. The SEPG also serves as a facilitator to ensure the successful completion of the goals and improvement activities documented in the Center Plan, such as process and software technology improvements.

Facilitate Software Process Improvement Throughout the Organization

The SEPG maintains the motivation and enthusiasm for software process improvement at LaRC. The Group will champion the SPI initiative throughout the organization. The SEPG, with the help of the Management Steering Group (MSG), will obtain and maintain management support for the initiative at all levels and across all domains at the Center.

The SEPG, with the organization's management, will develop and implement the Center Plan for LaRC Software Process Improvement. Under this plan, the SEPG will facilitate software process baselines, which will provide a foundation that defines existing capabilities and against which improvement activities can be planned.

Provide Process Consultation

The SEPG supports LaRC line managers and development projects by providing process consultation when requested. It also works closely with the line managers and projects to provide guidance and support when improvement activities are being introduced. It can assist the LaRC organizations in evaluation of new software technology and can also help plan for the introduction and transition to new technologies.

Track and Report SPI Progress

The SEPG monitors all the SPI activities against the Center Plan for LaRC Software Process Improvement and reports their status to the MSG and the Strategic Leadership Council (SLC). The SEPG will establish and maintain a LaRC Software Process Improvement initiative Web site for retaining the various artifacts that result from the improvement activities.

Serve as Focal Point for Organizational Learning

The SEPG will serve as a focal point of the SPI efforts by facilitating training in software process improvement and providing education in subjects related to the Center Plan. From the LaRC Software Process Improvement Initiative Web site, the SEPG will maintain and disseminate lessons learned and other results from the SPI initiative.

Scope

In addition to its chair, the SEPG is comprised of a software practitioner representative from each LaRC organization involved in software management, development, maintenance, or assurance. These practitioners work together to address the software process improvement interests of the entire Center. The SEPG will exist for the duration of the SPI initiative. The SEPG may be extended with additional organizational representatives to work on improvement activities local to specific organizations.

Mission

- To manage the LaRC software process improvement initiative
- To organize and implement the prioritized activities in the approved Center Plan for LaRC Software Process Improvement and to work toward achievement of the Plan goals
- To facilitate and monitor the development and implementation of process improvements throughout the Center
- To serve as a focal point for learning
- To create an atmosphere to foster improvement

Software Engineering Process Group Responsibilities

- With the MSG, define and manage the plan for development and implementation of software process improvements across LaRC
- Implement planned activities
- Define and improve Langley Management System (LMS) software engineering procedures
- Build and reinforce management support for the SPI initiative
- Provide a resource pool for software engineering expertise and corporate knowledge
- Provide consultation and guidance on appropriate levels of software engineering implementation and future directions
- Provide and facilitate education on software engineering to management and staff *via* workshops, seminars, and symposia; set up news/user groups; and maintain Web site
- Provide a repository for reuse code, documents, tool recommendations, processes, LaRC best practices, templates, lessons learned, metrics, and examples via the LaRC Software Process Improvement Initiative Web site (http://sw-eng.larc.nasa.gov)
- Facilitate sharing of tools and COTS maintenance costs across projects
- Work with LaRC organizations to establish Technical Working Groups (TWGs) to implement the SPI objectives
- Estimate TWG resources needed for improvement activities and recommend TWG members
- Designate an SEPG member to guide each improvement activity as described in the Center Plan for LaRC Software Process Improvement and to facilitate the TWG meetings
- Monitor progress and review periodic TWG reports from designated SEPG member
- Review schedule and deliverables of the TWGs
- Approve the pilot project for each TWG
- Develop, coordinate, and integrate SEPG and TWG developed artifacts into LMS software procedures
- Solicit and incorporate feedback on overall SPI initiative and document lessons learned
- Leverage SEPG experiences and lessons learned across LaRC
- Support the LaRC representatives to the NASA Software Working Group

Software Engineering Process Group (SEPG) Chair Responsibilities

- Manage the Center Plan for LaRC Software Process Improvement and coordinate the day-to-day SEPG activities
- As member of the MSG, act as liaison between MSG and SEPG and report on SPI initiative status and accomplishments
- Ensure alignment with Langley Management System
- Advise MSG of potential SPI risks and recommended mitigation actions

Appointment of a new SEPG member is by the following process:

(1) The Directorate Head identifies the new member to the SEPG Chair (via e-mail, with copies to the MSG Chair and SEPG Deputy Chair)

(2) The SEPG Chair contacts the new member to confirm (via e-mail, with copies to the MSG Chair, Directorate Head, and SEPG Deputy Chair). This e-mail reaffirms the requested 0.5 FTE commitment. It also encourages the new member to review the SEPG charter and become familiar with the Center Plan.

Conduct of Operations

- The SEPG will report to and the receive guidance from the MSG
- The SEPG will hold regular meetings as required to accomplish the activities and goals of the Center Plan for LaRC Software Process Improvement
- The SEPG will keep the Center informed of the SPI progress *via* the LaRC Software Process Improvement Initiative Web page and other media
- The SEPG will facilitate TWGs
- The SEPG will present periodic status reviews and briefings to the MSG and SLC

Expected Products

- Annual updates to the Center Plan for LaRC Software Process Improvement
- Documented processes, examples, checklists, templates, training, and LMS procedures for the execution of the LaRC Center Plan
- Results of reviews of proposed Agency software policies, standards, and training materials
- Status review briefings to the MSG, the LaRC Strategic Leadership Council, and NASA Office of Chief Engineer
- Status Reports to organizations involved in SPI activities
- LaRC Software Process Improvement Initiative Web site, which will house SPI products (e.g., pilot reports and examples)
- Presentations/articles to LaRC workforce on process improvement
- LaRC software organizational baseline briefings